Development of a Logix/Studio 5000 Project

Course Description

Upon completion of this course, given a functional specification for a Logix5000™ application, you should be able to develop a project to meet the specification requirements.

This course covers tasks common to the following hardware, which all use the Logix5000 control engine:
• ControlLogix® controllers
• CompactLogix™ controllers
• SoftLogix™ controllers

This course builds upon your knowledge of common controller terms and operation and your experience with basic ladder logic programming. You can gain a deeper understanding of project development tasks that are common to all Logix5000 controllers. Such tasks include organizing tasks and routines, organizing controller data, configuring modules, and sharing data. You will also use producer/consumer technology for multicasting to input and output devices, sharing data between controllers, and controlling remote I/O.

All Logix5000™ systems use the same control engine; therefore, tasks are similar.
You will see applicable references for other systems.

Target Audience:

Individuals who need to develop RSLogix/Studio 5000 Logix Designer® projects for any Logix5000 controller should attend this course.

Pre-requisites:

To successfully complete this course,

- **Ability to perform basic Microsoft Windows tasks.**
- **Knowledge of common controller terms and operation through experience or one of the following courses:**
  - ControlLogix System Fundamentals (AB-1)
  - RSTrainer for ControlLogix Fundamentals computer based training
- **Ability to write basic ladder logic with common instructions, such as bit, timer, counter, move, and comparison instructions through experience or this course:**
  - Basic Ladder Logic Programming (AB-2)

Course Duration:

    4 days, 7hours/day (from 9:00am to 4:00 pm).

Technical Contents:

- Creating and Organizing a Project
- Creating a Periodic Task
- Creating an Event Task
- Developing an Add-On Instruction in a Ladder Diagram
- Organizing Arrays
- Creating a User-Defined Data Type
- Importing Components
- Entering, Editing, and Verifying Ladder Logic
- Configuring a Controller to Produce and Consume Data
- Configuring a Logix5000 Message
- Configuring Controllers and Modules to Communicate and Share Data over EtherNet/IP

- Communicating with a Local 1756-I/O Module
- Allocating Connections
- Retrieving and Setting Controller Status Values with GSV/SSV Instructions
- Programming a BTD Instruction
- Handling a Major Fault
- Managing Project Files
- Updating Logix5000 Firmware
- Integrated Practice: Developing a Studio 5000 Logix Designer Project